



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-0286; Project Identifier AD-2021-01081-R]

RIN 2120-AA64

Airworthiness Directives; Bell Textron Canada Limited (Type Certificate Previously Held by Bell Helicopter Textron Canada Limited) Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for Bell Textron Canada Limited (type certificate previously held by Bell Helicopter Textron Canada Limited) Model 206L, 206L-1, 206L-3, and 206L-4 helicopters with a certain part-numbered main rotor (M/R) blade installed under Supplemental Type Certificate (STC) SR02684LA. This proposed AD was prompted by delamination of M/R blades. This proposed AD would require a repetitive inspection for delamination, and depending on the results, removing the M/R blade from service and reporting certain information. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Van Horn Aviation, L.L.C., ATTN: Dean Rosenlof, 1510 West Drake Drive, Tempe, AZ 85283; telephone (480) 483-4202; email dean@vanhornaviation.com. You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0286; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Peter Jarzomb, Aerospace Engineer, Airframe Section, Los Angeles ACO Branch, Compliance & Airworthiness Division, FAA, 3960 Paramount Blvd., Lakewood, CA 90712; telephone (562) 627-5234; email peter.jarzomb@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2022-0286; Project Identifier AD-2021-01081-R” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as "PROPIN." The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Peter Jarzomb, Aerospace Engineer, Airframe Section, Los Angeles ACO Branch, Compliance & Airworthiness Division, FAA, 3960 Paramount Blvd., Lakewood, CA 90712; telephone (562) 627-5234; email peter.jarzomb@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The FAA proposes to adopt a new AD for Bell Textron Canada Limited (type certificate previously held by Bell Helicopter Textron Canada Limited) Model 206L, 206L-1, 206L-3, and 206L-4 helicopters with a certain serial-numbered M/R blade part number (P/N) 20633000-101 installed under STC SR02684LA. Testing by Van Horn Aviation, L.L.C., revealed the potential for delamination in M/R blade P/N 20633000-101. Delaminations were then confirmed by inspection of in-service M/R blades. Testing by Van Horn Aviation, L.L.C., has confirmed that the 90° plies fail in spanwise tension (normal to the fiber direction) at the inboard end of the weight receptacle near M/R blade station 186.0. Delamination then propagates outboard from M/R blade station 186.0 at the interface between the 0° and 90° plies. According to Van Horn Aviation, L.L.C., fatigue testing has shown that the delamination initiates almost immediately and progresses slowly. Thereafter, the delamination grows more slowly in a stable, predictable manner. The delamination has been found to develop first on the lower surface and grow outboard from the inboard end of the weight receptacle and forward of

the balance weight pocket. After approximately 4 to 6 inches growth of the delamination on the lower surface, a similar delamination becomes detectable on the M/R blade upper surface. Should the delaminations continue to grow to the point of static overload, the receptacle could depart the M/R blade.

Accordingly, this proposed AD would require a repetitive inspection for delamination, and depending on the results, removing the M/R blade from service and reporting certain information. This condition, if not addressed, could result in reduced structural integrity of the M/R blade, excessive vibration, and subsequent loss of control of the helicopter.

FAA's Determination

The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Related Service Information under 1 CFR Part 51

The FAA reviewed Van Horn Aviation, L.L.C., Service Bulletin Notice No. 33000-4R3, dated November 8, 2021 (SB 33000-4R3). This service information specifies procedures to identify "Zone 1" and "Zone 2" inspection areas, accomplish repetitive visual and tap inspections of the zones to detect and monitor the growth of any delamination, and depending on the results, removing the M/R blade from service and contacting Van Horn Aviation, L.L.C.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

Proposed AD Requirements in this NPRM

This proposed AD would require, at specified intervals, removing the affected M/R blade, drawing rectangular inspection areas "Zone 1" and "Zone 2" with a permanent marker, tap inspecting the inspection areas for delamination, marking and measuring the length of any delamination, and depending on the results, removing the M/R blade from service. This proposed AD would also require reporting certain information to Van Horn Aviation, L.L.C.

Differences Between this Proposed AD and the Service Information

This proposed AD would apply to additional M/R blades, serial numbers A007, A008, and A009, that are not identified in SB 33000-4R3 as the FAA has determined that those serial-numbered blades are subject to the same unsafe condition. The proposed AD would require using certain part-numbered composite tap hammers, whereas SB 33000-4R3 does not. SB 33000-4R3 specifies procedures to visually inspect the M/R blade, whereas this proposed AD would not. If there is any delamination in the upper surface inspection zone ("Zone 1"), this proposed AD would require removing the M/R blade from service, whereas SB 33000-4R3 does not specify procedures for this condition.

Interim Action

The FAA considers that this proposed AD could be an interim action. The inspection reports that would be required by this AD will enable the FAA to obtain better insight into the unsafe condition. If final action is later identified, the FAA might consider further rulemaking.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 23 helicopters of U.S. registry. Labor rates are estimated at \$85 per work-hour. Based on these numbers, the FAA estimates the following costs to comply with this proposed AD.

Removing, tap inspecting, and re-installing an M/R blade would take about 4.5 work-hours for an estimated cost of \$383 per M/R blade, per inspection cycle and up to \$8,809 for the U.S. fleet per M/R blade, per inspection cycle. Replacing an M/R blade would take about 4 work-hours and parts would cost about \$71,500 per M/R blade for a total of \$71,840 per M/R blade. Reporting information to Van Horn Aviation, L.L.C., would take about 1 work-hour for an estimated cost of \$85 per report.

Paperwork Reduction Act

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for

this collection of information is estimated to take approximately 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to: Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and

(3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

Bell Textron Canada Limited (Type Certificate Previously Held by Bell Helicopter Textron Canada Limited): Docket No. FAA-2022-0286; Project Identifier AD-2021-01081-R.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bell Textron Canada Limited (type certificate previously held by Bell Helicopter Textron Canada Limited) Model 206L, 206L-1, 206L-3, and 206L-4 helicopters, certificated in any category, with main rotor (M/R) blade part number (P/N) 20633000-101 with serial number A007, A008, A009, or A012 through A104 inclusive installed under Supplemental Type Certificate SR02684LA.

(d) Subject

Joint Aircraft System Component (JASC) Code: 6210, Main Rotor Blades.

(e) Unsafe Condition

This AD was prompted by reports of delamination of M/R blades. The FAA is issuing this AD to address delamination of an M/R blade initiating in the 90° plies at the lower inboard end of the weight pocket receptacle. The unsafe condition, if not addressed, could result in reduced structural integrity of the M/R blade, excessive vibration, and subsequent loss of control of the helicopter.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) Accomplish the actions required by paragraph (g)(2) of this AD at the following compliance time, whichever occurs later:

(i) Before the M/R blade accumulates 400 total hours time-in-service (TIS) or 2,400 engine starts since initial installation on any helicopter, whichever occurs first; or

(ii) Within 100 hours TIS after the effective date of this AD.

(2) Remove each M/R blade from the helicopter, place it on a flat, stable surface, and accomplish the following:

(i) Use a permanent marker to draw rectangular inspection “Zone 1” on the upper surface of the M/R blade at M/R blade stations 186.0 and 191.0, beginning 1.1 inches from the leading edge of the M/R blade to 4.9 inches from the leading edge of the M/R blade. Draw lines from the inboard end to the outboard end to connect each end at 1.1 inches and 4.9 inches. Draw parallel lines from the inboard end of the inspection zone to the outboard end of the inspection zone, with the lines spaced 0.50 inch apart.

Note 1 to paragraph (g)(2)(i): This note applies to paragraphs (g)(2)(i) and (ii) of this AD. Figure 4 of Van Horn Aviation, L.L.C., Service Bulletin Notice No. 33000-4R3, dated November 8, 2021 (SB 33000-4R3) depicts “Zone 1” and “Zone 2.”

(ii) Use a permanent marker to draw rectangular inspection “Zone 2” on the lower surface of the M/R blade at M/R blade stations 186.0 and 191.0, beginning from the forward edge of the weight receptacle pocket and extending 1 inch in the direction towards the leading edge of the M/R blade. Draw lines from the inboard end to the outboard end to connect each end at the weight receptacle pocket and 1 inch forward of

the weight receptacle pocket. Draw parallel lines from the inboard end of the inspection zone to the outboard end of the inspection zone, with the lines spaced 0.50 inch apart.

(iii) Using composite tap hammer Abaris Training Tap Hammer P/N ABATH, HeatCon Tap Hammer P/N HCS1104-01, Brown Tool Composite Tap Hammer P/N BAT-CTH8, or MATCO Tools Composite Tap Hammer P/N T4BAT-CTH8, tap inspect the areas within “Zone 1” and “Zone 2” for any delamination by following Tap Inspect Balance Receptacle, paragraph A.(4) of SB 33000-4R3. Where SB 33000-4R3 specifies to mark the location where the delamination starts, use a permanent marker.

(iv) If there are any marks where the delamination starts, connect the marks indicating the delamination location and measure the length at the farthest point from the inboard end of the inspection area.

(v) If there is any delamination in the lower surface inspection zone (“Zone 2”) that is 6.0 or more inches in length or if there is any delamination in the upper surface inspection zone (“Zone 1”), before further flight, remove the M/R blade from service.

(3) Thereafter repeat the actions required by paragraph (g)(2) of this AD at intervals not to exceed 400 hours TIS or 2,400 engine starts, whichever occurs first.

(4) If there is any delamination, within 30 days after accomplishing the actions required by paragraphs (g)(1) or (3) of this AD, report each delamination size and location, and the total hours TIS and total engine starts since initial installation of the M/R blade, to Mr. Dean Rosenlof, Van Horn Aviation, L.L.C., 1510 West Drake Drive, Tempe, AZ 85283, or by email to info@vanhornaviation.com.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Los Angeles ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (i)(1) of this AD. Information may be emailed to: 9-ANM-LAACO-AMOC-REQUESTS@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(i) Related Information

(1) For more information about this AD, contact Peter Jarzomb, Aerospace Engineer, Airframe Section, Los Angeles ACO Branch, Compliance & Airworthiness Division, FAA, 3960 Paramount Blvd., Lakewood, CA 90712; telephone (562) 627-5234; email peter.jarzomb@faa.gov.

(2) For service information identified in this AD, contact Van Horn Aviation, L.L.C., ATTN: Dean Rosenlof, 1510 West Drake Drive, Tempe, AZ 85283; telephone (480) 483-4202; email dean@vanhornaviation.com. You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

Issued on March 15, 2022.

Derek Morgan, Acting Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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